CLAIMS

The following is a detailed listing of all claims that are, or were, in the Application.

1-25.   Canceled

26.   (Currently amended) A document management system, comprising:

a document storage device configured to store at least one XML[[-]]_electronic document describing metadata related to [[a]] broadcasting a plurality of television programs, the XML electronic document having a hierarchical structure and comprising an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs; and

a document receiving device coupled to the document storage device to receive updates to the XML electronic document, each of the received updates including the upper structural element and updated information for a subset of the plurality of lower structural elements, wherein each lower structural element in the subset has a respective version value and the document receiving device is configured to process one of multiple versions of the XML electronic document according to [[a]] the version values in the updates to of the versions of the XML electronic document, wherein date information and time information of contents of the XML electronic document are used [[as]] in the version values.

27.   (Canceled)

28.   (Currently amended) The document management system of claim 26, wherein a lower element version value is updated for one of the lower structural elements when content of the in that lower structural element of the XML electronic document is changed, and wherein the updated lower element version value for that lower structural element is used as a corresponding upper element version value for the upper structural element.

29.   (Currently amended) The document management system of claim 26, wherein each ~~element~~ version value includes date and time information according to when said contents of the corresponding element was updated.

30.   (Previously presented) The document management system of claim 26, wherein the document receiving device is configured to request the XML document.

31.   (Currently amended)   The document management system of claim 29, wherein each ~~element~~ version value includes date and time information when contents of the corresponding element was changed.

32.   (Currently amended)   The document management system of claim 28, wherein a type of the content of the lower element is included in the ~~upper element~~ version value <u>of the upper structural element</u>.

33.   (Previously presented)   The document management system of claim 26, wherein version information of said contents is defined by a syntax of said electronic document.

34.   (Previously presented) The document management system of claim 33, wherein said syntax is XML schema.

35.   (Currently amended)   The document management system of claim 34, wherein said contents includes at least one ~~number selected~~ <u>member</u> from the group of title, synopsis, review, and casting ~~of said broadcasting~~ <u>for each of the television</u> program<u>s</u>.

36.   (Currently amended)   ~~For~~ <u>A method implemented by an apparatus for updating a portion of</u> an electronic document describing metadata related to [[a]] broadcasting <u>a plurality of television programs, the electronic document</u> ~~and~~ having <u>a hierarchical structure that includes an upper structural element and</u> a plurality of <u>lower</u>

structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and ~~, a method for updating one of the elements~~ stored in a client, the method comprising:

requesting an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to ~~a broadcasting~~ one or more of the television programs scheduled for broadcast;

receiving an update to the electronic document in response to the request, the received update including the upper structural element and said updated version of said subset of the lower structural elements, wherein said updated version is identified by an element identification including an element version, wherein said element version comprises date information and/or time information; and

updating said subset of the lower structural elements stored in said client with said received updated version of said subset of the lower structural elements ~~and~~ without replacing the electronic document in its entirety.

37.   (Currently amended) The method of claim 36, wherein said element version includes date and time information according to when contents in the subset of the lower structural elements were updated.

38.   (Currently amended) The method of claim 37, wherein said element version includes date and time information according to when said contents in the subset of the lower structural elements were changed.

39.   (Currently amended) The method of claim 36, wherein said requesting comprises transmitting a current version of said subset of the lower structural elements, and wherein said element version of said received updated version is later than an element version of said current version.

40.   (Currently amended)   The method of claim 36, ~~wherein said element comprises an upper structure and a lower structure in hierarchical arrangement,~~ wherein when said <u>subset of the</u> lower <u>structural</u> ~~structure of said~~ element<u>s</u> is changed, a version value <u>for each</u> of the lower <u>structural elements</u> ~~structure~~ is updated and the updated version value is reflected in a version value of said upper <u>structural element</u> ~~structure~~.

41.   (Currently amended) The method of claim 40, wherein a largest value [[of]] <u>among</u> the version values [[of]] <u>for</u> the lower <u>structural elements</u> ~~structure~~ is used as the version value of the upper <u>structural element</u> ~~structure~~.

42.   (Currently amended) The method of claim 41, wherein a type of <u>at least one of</u> the updated lower <u>structural elements</u> ~~structure~~ is included in the version value of the upper <u>structural element</u> ~~structure~~.

43.   (Previously presented) The method of claim 37, wherein said element version of said contents is defined by a syntax of said electronic document.

44.   (Previously presented)   The method of claim 43, wherein said syntax is XML schema.

45.   (Currently amended) The method of claim 44, wherein said contents includes at least one member ~~selected~~ from the group of title, synopsis, review, and casting of the ~~broadcasting~~ <u>one or more television</u> program<u>s</u>.

46.   (Currently amended)   ~~For~~ <u>A method implemented by an apparatus for updating a portion of</u> an electronic document describing metadata related to ~~a television~~ broadcasting <u>a plurality of television</u> program<u>s, the electronic document</u> ~~and~~ having <u>a hierarchical structure that includes an upper structural element and</u> a plurality of <u>lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs,</u>

wherein each element is based on XML and ,-a method for updating one of the elements stored in a client, the method comprising:

requesting from a provider an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to [[a]] one or more of the television broadcasting programs scheduled for broadcast; and

updating said subset of the lower structural elements stored in said client with a version later than a version of said subset of the lower structural elements stored in said client and without replacing the electronic document in its entirety, wherein said later version of the subset of the lower structural elements is received in combination with the upper structural element and is identified by an element identification including an element version from said provider, wherein said element version comprises date information and/or time information.

47. (Currently amended) For A method implemented by an apparatus for processing a response to a request for updating an electronic document describing metadata related to [[a]] broadcasting a plurality of television programs, the electronic document and having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and, a method for processing a response to a request for updating one of the elements stored in a client and the request for updating the electronic document requests an updated version of a subset of the lower structural elements, the method comprising:

updating said subset of the lower structural elements stored in said client with [[an]] the updated version of said subset of the lower structural elements and without replacing the electronic document in its entirety, wherein said updated version of the subset of the lower structural elements is received in combination with the upper structural element and is identified by an element identification including an element version, wherein said element version comprises date information and/or time information.

48.   (Currently amended)   The method of claim 47, <u>further comprising:</u> receiving <u>an update to the electronic document in response to the request, the received update including the upper structural element and</u> said updated version of said <u>subset of the lower structural</u> element<u>s</u> identified by said element identification and said element version from a provider.

49.   (Currently amended) The method of claim 47, wherein said element version includes date and time information according to when said metadata <u>in the subset</u> of the <u>lower structural</u> element<u>s</u> were updated.

50.   (Currently amended) The method of claim 49, wherein said element version includes date and time information according to when said metadata <u>in the subset</u> of the <u>lower structural</u> element<u>s</u> were changed.

51.   (Currently amended)   The method of claim 47, wherein said request comprises a selected version of said <u>subset of the lower structural</u> element<u>s</u>, and wherein said received updated version of said <u>subset of the lower structural</u> element<u>s</u> is later than said selected version.

52.   (Currently amended)   The method of claim 47, ~~wherein said element comprises an upper structure and a lower structure in hierarchical arrangement,~~ wherein when said <u>subset of the</u> lower <u>structural</u> ~~structure of said~~ element<u>s</u> is changed, a version value <u>for each</u> of the lower structure is updated and the updated version value is reflected in a version value of said upper <u>structural element</u> ~~structure~~.

53.   (Currently amended) The method of claim 52, wherein a largest value [[of]] <u>among</u> the version values [[of]] <u>for</u> the lower <u>structural element</u><u>s</u> ~~structure~~ is used as the version value of the upper <u>structural element</u> ~~structure~~.

54.   (Currently amended) The method of claim 53, wherein a type of <u>at least one</u> <u>of</u> the updated lower <u>structural elements</u> <s>structure</s> is included in the version value of the upper <u>structural element</u> <s>structure</s>.

55.   (Previously presented) The method of claim 47, wherein said element version is defined by a syntax of said electronic document, and wherein said syntax is XML schema.

56.   (Currently amended)   The method of claim 47, wherein said metadata includes at least one member <s>selected</s> from the group of title, synopsis, review, and casting <u>for one or more</u> of said <s>broadcasting</s> <u>television</u> program<u>s</u>.

57.   (Canceled)

58.   (Currently amended)   <s>For</s> <u>A method implemented by an apparatus for</u> <u>updating a portion of</u> an electronic document describing metadata related to [[a]] broadcasting <u>a plurality of television</u> program<u>s, the electronic document</u> <s>and</s> having <u>a</u> <u>hierarchical structure that includes an upper structural element and</u> a plurality of <u>lower</u> <u>structural</u> elements <u>located below the upper structural element in the hierarchical structure to</u> <u>describe broadcast information and content information for each of the television programs,</u> wherein each element is based on XML, <s>a method for providing an updated version of one of</s> <s>the elements,</s> the method comprising:

          receiving a request from a client for <s>the</s> <u>an</u> updated version of <u>a subset of</u> said <u>lower structural</u> elements of the electronic document describing metadata<u>, wherein the subset</u> <u>is</u> related to <s>a broadcasting</s> <u>one or more of the television</u> program<u>s scheduled for broadcast</u>;

          determining whether a provider has a capability of handling said request for the updated version; and

          supplying <u>an update to the electronic document in response to the request, the</u> <u>supplied update including the upper structural element and</u> said updated version of said <u>subset of the lower structural</u> element<u>s</u> in accordance with a determined result, wherein said

updated version is identified by an element identification including an element version, wherein said element version comprises date information and/or time information.

59.   (Currently amended) The method of claim 58, wherein said request for said updated version of said <u>subset of the lower structural</u> element<u>s</u> identifies said <u>subset of the lower structural</u> element<u>s</u> using element identification and a current element version.

60.   (Currently amended)   The method of claim 58, <u>further</u> comprising<u>:</u>
identifying a version of said <u>subset of the lower structural</u> element<u>s</u> later than a requested version of said <u>subset of the lower structural</u> element<u>s</u> in said provider as said updated version of said <u>subset of the lower structural</u> element<u>s</u>.

61.   (Currently amended) The method of claim 58, wherein said element version includes date and time information according to when said metadata <u>in the subset</u> of the <u>lower structural</u> element<u>s</u> were updated.

62.   (Currently amended) The method of claim 61, wherein said element version includes date and time information according to when said metadata <u>in the subset</u> of the <u>lower structural</u> element<u>s</u> were changed.

63.   (Currently amended)   The method of claim 58, ~~wherein said element comprises an upper structure and a lower structure in hierarchical arrangement,~~ wherein when said <u>subset of the</u> lower ~~structure of said~~ structural element<u>s</u> is changed, a version value <u>for each</u> of the lower <u>structural</u> element<u>s</u>~~structure~~ is updated and the updated version value is reflected in a version value of said upper <u>structural</u> element~~structure~~.

64.   (Currently amended) The method of claim 63, wherein a largest value [[of]] <u>among</u> the version values [[of]] <u>for</u> the lower <u>structural</u> element<u>s</u>~~structures~~ is used as the version value of the upper <u>structural</u> element~~structure~~.

65.   (Currently amended) The method of claim 64, wherein a type of <u>at least one</u> <u>of</u> the updated lower <u>structural elements</u>-structure is included in the version value of the upper <u>structural element</u>-structure.

66.   (Previously presented) The method of claim 58, wherein said element version is defined by a syntax of said electronic document.

67.   (Previously presented) The method of claim 66, wherein said syntax is XML schema.

68.   (Currently amended) The method of claim 67, wherein said metadata includes at least one member selected from the group of title, synopsis, review, and casting of the broadcasting <u>one or more television</u> program<u>s</u>.

69.   (Currently amended) For <u>A method implemented by an apparatus for</u> <u>replying to a request for updating</u> an electronic document describing metadata related to [[a]] broadcasting <u>a plurality of television</u> program<u>s, the electronic document</u> and having <u>a</u> <u>hierarchical structure that includes an upper element and</u> a plurality of <u>lower structural</u> elements <u>located below the upper structural element in the hierarchical structure to describe</u> <u>broadcast information and content information for each of the television programs</u>, wherein each element is based on XML <u>and</u>, a method for replying to a request for updating one of the elements stored in a client, the method comprising:

supplying said client with <u>an update to the electronic document in response to</u> <u>the request, the supplied update including the upper structural element and</u> an updated version of <u>a subset of</u> said <u>lower structural</u> element<u>s</u> of the electronic document describing metadata<u>, wherein the subset is</u> related to [[a]] <u>one or more of the television</u> broadcasting program<u>s scheduled for broadcast,</u> and wherein the updated version is identified by an element identification including an element version, wherein said element version comprises date information and/or time information.

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70.   (Currently amended)   ~~For~~ A method implemented by an apparatus for managing an electronic document describing metadata related to broadcasting a plurality of television ~~broadcasting~~ programs, the electronic document ~~and~~ having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and ~~, a method for managing one of the elements~~ stored in a client, the method comprising:

maintaining ~~using~~ a version information [[of]] for each of said lower structural elements of the electronic document describing metadata related to the television ~~broadcasting~~ programs, wherein said version information comprises date information and/or time information; and

transmitting to the client an update to the electronic document, the transmitted update including the upper structural element and an updated version of said subset of the lower structural elements, wherein said updated version is identified by an element identification including the version information for the subset of the lower structural elements.

71.   (Cancelled)

72.   (Currently amended)   The method of claim 70 [[71]], wherein ~~each element~~ the version information includes date and time information according to when said metadata in the subset of said lower structural elements were updated.

73.   (Currently amended)   The method of claim 72, wherein ~~each element~~ the version information includes date and time information according to when said metadata in the subset of the lower structural elements were changed.

74. (Currently amended) The method of claim 70 [[71]], further comprising:

receiving a request for [[an]] the updated version of said subset of the lower structural elements.

75. (Currently amended) The method of claim 70, wherein said element comprises an upper structure and a lower structure in hierarchical arrangement, wherein when said subset of the lower structural structure of said elements is changed, a version value for each of the lower structural elements structure is updated and the updated version value is reflected in a version value of said upper structural element structure.

76. (Currently amended) The method of claim 75, wherein a largest value [[of]] among the version values [[of]] for the lower structural elements structures is used as the version value of the upper structural element structure.

77. (Currently amended) The method of claim 76, wherein a type of at least one of the updated lower structural elements structure is included in the version value of the upper structural element structure.

78. (Previously presented) The method of claim 70, wherein said element version information is defined by a syntax of said electronic document.

79. (Previously presented) The method of claim 78, wherein said syntax is XML schema.

80. (Currently amended) The method of claim 79, wherein said metadata includes at least one member selected from the group of title, synopsis, review, and casting of one or more of the television broadcasting programs.

81-86. (Canceled)